

Customer No.: 31561
Docket No.: 13366-US-PA
Application No.: 10/709,924

REMARKS

The Office Action rejected all presently-pending claims 1, 2, 4-6 and 15-18 under 35 U.S.C. 102(b), as being anticipated by Yang US Patent 6,306,700 (hereinafter Yang). Applicant cancels claim 6, adds new dependent claim 19 to depend on claim 5, and amends claims 1, 2, 5, 15 and 17-18 based on Fig. 2B and the description of "The drift regions 260 and the modifying doped regions 270 can be formed simultaneously by implanting a dopant into the substrate 200 using a mask layer having an opening 280 therein as a part of the implantation mask" in paragraph [0019] of the specification. Reconsideration and allowance of the pending claims 1, 2, 4-5 and 15-19 are respectfully requested.

Discussion of Office Action Rejections

The Office Action rejected claims 1, 2, 4-6 and 15-18 under 35 U.S.C. 102(b) as being anticipated by Yang.

In response to the rejection to claims 1, 2, 4-5 and 15-18 under 35 U.S.C. 102(b) as being anticipated by Yang, Applicant amends claims 1, 2, 5, 15 and 17-18 and respectfully traverses this rejection.

Applicant submits that neither the high-voltage metal-oxide-semiconductor devices as set forth in claims 1, 2, 4-5 and 15-19 are taught, disclosed, nor suggested by Yang or any of the other cited references, taken alone or in combination.

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Regarding claim 1, Applicant submits that the modifying doped region provided in claim 1 is located in one side of and not under the doped region. However, the N- type doped regions 222a/b provided by Yang is under and not located in one side of the N+ type doped regions 232a/b. That is, Yang neither teach, disclose, nor suggest the modifying doped region is located in one side of and not under the doped region.

In another aspect, the doped regions provided in claim 1 may correspond to the N+ type doped regions 232a/b and the N- type doped regions 222a/b; the drift region provided in claim 1 may correspond to the N- type doped regions 216a/b; and the modifying doped region provided in claim 1 may correspond to the P- type doped regions 226a/b. Meanwhile, the drift region and the modifying doped region provided in claim 1 are doped with the same type dopant. However, the N- type doped regions 216a/b and the P- type doped regions 226a/b are doped with different type dopants. That is, Yang neither teach, disclose, nor suggest the drift region and the modifying doped region are doped with the same type dopant.

Regarding claim 5, Applicant submits that the modifying doped region provided in claim 5 is located in one side of and not under the at least one lightly doped grade region. However, the N- type doped regions 222a/b provided by Yang is under the N+ type doped regions 232a/b. That is, Yang neither teach, disclose, nor suggest the modifying doped region is not under the at least one lightly doped grade region. Moreover, a heavily doped contact region and a lightly doped grade region under and surrounding the heavily doped contact region are provided in claim 5, and the drift region and the modifying doped region are located in sides of and not under the at

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least one lightly doped grade region. However, the lightly doped grade region is not provided by Yang. That is, Yang neither teaches, discloses, nor suggests a lightly doped grade region under and surrounding the heavily doped contact region.

Accordingly, the present invention as set forth in claims 1 and 5 should not be considered as being anticipated by Yang, and claims 1 and 5 should be allowable. For at least the same reasons, dependent claims 2, 4 and 15-16 patently define over the prior art as a matter of law, for at least the reason that these dependent claims contain all features of their respective independent claim.

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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1, 2, 4-5 and 15-19 are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,


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